REMARKS

Upon entry of the present Reply, claims 7-9 and 14-18 are pending in this application. Claims 1-3, 5, 10 and 11 are cancelled herein, without prejudice. Claims 4, 6, 12 and 13 were previously cancelled. New claims 15-18 are added herein. Support for new claims 15 and 16 is found, for example, in the specification at page 3, line 20, and throughout the specification. Support for new claims 17 and 18 is found, for example, in original claims 7 and 8.

Rejections of Claims over Ye et al.

Claims 1-3, 5, 10 and 11 stand rejected as anticipated by Ye et al. Applicants have cancelled these claims, rendering moot this ground of rejection.

Rejections of Claims over Ye et al. in view of Zuckerman

Claims 7-9 and 14 stand rejected as obvious over Ye et al. in view of Zuckerman. Applicants respectfully traverse this rejection for at least the following reasons.

The method of the invention described in presently pending claims 7-9 and 14-18 shows a significant effect on delivering a biological regulator such as DNA into a cell as shown in the following comparative data.

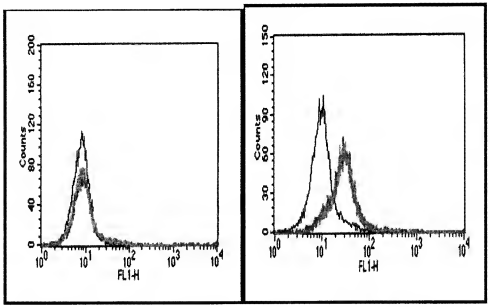
Lipofectamine is widely used for delivery of naked DNA. However, lipofectamine cannot deliver the naked DNA into suspended cells such as T cells. In contrast, delivery using the method described in claims 7-9 and 14-18 can deliver naked DNA regardless of target cell type.

The present inventors have carried out the following experiment to demonstrate the different results obtained by a process in accordance with the present invention as compared to the prior art.

pGFP (green fluorescence protein)-GBS (ga14 binding sequence), lipofectamine (Invitrogen) and Mph1-Ga14 were prepared, and primary T (CD3+) cells were extracted from rat spleen tissue. The complexes of lipfectamine-pGFP-GBS (prior art) and Mph1-Ga14-pGFP-GBS (the present invention) were added to a 35 mm Petri dish in which

primary T cells (2 x 10^5) were incubated. After adding the complexes, the samples were incubated for 24 hrs and the green fluorescence which was expressed by the delivered

[The comparative data]



(a) Lipofectamine-pGFP-GBS (b) Mph1-Gal4-pGFP-GBS

pGFP was detected by FACS analysis. The results are shown in the following graphs, and demonstrate a clear and unexpected distinction between the prior art and the present invention:

Accordingly Applicants respectfully submit that these results clearly demonstrate that the presently claimed invention of claims 7-9 and 14-18 would not have been obvious. Therefore, Applicants respectfully request withdrawal of the asserted rejections and allowance of the claims. Notice to such effect is respectfully requested.

Conclusion

For the reasons set forth in the foregoing, Applicants respectfully submit that the present application is in condition for allowance, and an early notice to such effect is respectfully requested.

Should the Examiner consider that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Petition and the fee for a three-month extension and for an RCE is submitted herewith. The assignee of the present application is a small entity, and the fees submitted are for a small entity. If any additional fees are required for the filing of this paper, Applicants request the Commissioner to charge the fees to deposit account #18-0988, Dkt. No. NAMNP0103US.

Respectfully submitted,
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